Linked Open Data
Are we blessed or cursed?

Peder Gammeltoft
University of Bergen
Norway

**United Nations Group of Experts
On Geographical Names (UNGEGN)**

Promoting the collection, standardization and dissemination of geographical names

A Blessed or Cursed Technology?

- Definitions:
  - Linked Data:
  - **Linked Data is a set of design principles for sharing machine-readable interlinked data on the Web**

  - Linked Open Data:
  - **Combined with Open Data (freely available data), = Linked Open Data (LOD)**
  - **A virtual data cloud where anyone can access any data they are authorized to see and may also add to any data without disturbing the original data source**

A Blessed or Cursed Technology?

- A new technology

- For long no standards, no best practices

- Now:
  - Best practice recommendations by w3c (https://www.w3.org/TR/sdw-bp/)
  - Suitable ontologies in use

W3C Working Group Note		
10.	**Linked Data**	
11.	**Why are traditional Spatial Data Infrastructures not enough?**	
12.	**The Best Practices**	
12.1	Web principles for spatial data	
12.1.1	Spatial data identifiers	
12.1.2	Indexable data	
12.1.3	Linking data	
12.2	Spatial data	
12.2.1	Spatial data encoding	
12.2.2	Geometries and coordinate reference systems	
12.2.3	Relative positioning	
12.2.4	Spatial links	
12.2.5	Spatial data versioning	
12.3	Spatial data access	
12.4	Spatial metadata	

A Blessed or Cursed Technology?

- Why use Linked Open Data principles in the first place?
  - Easy retrival and easy remixing
  - Consistency across all metadata providers
  - Using standard web protocols

- Most important of all:
  - LOD facilitates the extension of one's data models and allows for easy updates
  - More efficient data integration of complex data and data-driven analytics
  - Able to handle huge datasets from disparate sources and link them

A Blessed or Cursed Technology?

- Challenges with Linked Open Data
  - Paradigm shift in managing data and new expertise necessary
  - Decentralizing information can subject NMAs to scrutiny and questioning
  - A need for the data to be structured and classified, and consistently organized
  - Opening data has generally not been a priority for stakeholders
    - Maintaining, cleaning and opening data can be resource-intensive
    - Fear of criticism when if datasets are problematic, incomplete or inaccurate
    - Converting an existing dataset to an LOD portal can be daunting
    - Management systems developed without considering public use or data-mobilization

A Blessed or Cursed Technology?

- Are we blessed, then?
  - No concensus about ontologies among NMAs
  - Few NMA Proof of Concepts or test applications in existence
  - New design principles to learn

  - Sector-crossing technologies
  - Allows for integration of scientific, technical, administrative and governance of geographical names
  - Allows for sharing data with Big Tech

Thank you for listening

**United Nations Group of Experts
On Geographical Names (UNGEGN)**

Promoting the collection, standardization and dissemination of geographical names

Content

- Welcoming (Pierre and Stefan) --- **5 minutes**

- Introduction of the speakers (Pier-Giorgio) **--- 10 minutes**

- Presentations
  - Introduction from Adam and Eve (Henrik) **--- 15 minutes**
  - National LOD implementation and projects
    - Netherlands (Lexi) **--- 10 minutes**
    - Germany (Falk) **--- 10 minutes**

- LOD – Are we blessed or cursed? (Peder) **--- 10 minutes**

- Questions & Answers (Pier-Giorgio) **--- 20 minutes**

- Closing remarks (Susan) **--- 10 minutes**

**United Nations Group of Experts
On Geographical Names (UNGEGN)**

Promoting the collection, standardization and dissemination of geographical names